

P16459

Serial No. 10/608,879

**IN THE CLAIMS:**

**Please amend the claims as follows:**

1 (currently amended). An optical device, comprising:

an input leg;

an output leg, parallel to said input leg and separated by a horizontal connecting portion, the horizontal connecting portion having a first angled surface above the input leg and a second angled surface above the output leg;

~~an angled partially reflective surface above said input leg; and~~

~~an angled reflective surface mirror above said output leg~~

a first coating to form a partially reflective mirror on the first angled surface over the input leg to allow a portion of a beam to pass straight through the input leg from a source; and

a second coating to form a substantially totally reflective mirror on the second angled surface above the output leg.

2 (original). The optical device as recited in claim 1 further comprising:

a lens integrated at a tip of said input leg.

3 (currently amended). The optical device as recited in claim 1 wherein,

said partially reflective ~~surface mirror~~ is positioned ~~on an angle~~ to reflect light ~~a remaining portion of the beam~~ from said input leg to said totally reflective surface mirror, and

said totally reflective mirror surface is positioned ~~on an angle~~ to reflect light through said output leg.

4 (currently amended). The optical device as recited in claim 3 further comprising:

a light source to emit a the beam in a vertical direction relative to a substrate into said input leg; and

a detector positioned on said substrate adjacent said laser to receive a the remaining portion of said beam from said output leg.

P16459

Serial No. 10/608,879

5 (original). The optical device as recited in claim 4 wherein said horizontal distance is a distance spanning said light source and said detector positioned on said substrate.

6 (original). The optical device as recited in claim 5 wherein said light source comprises a vertical cavity surface emitting laser (VCSEL).

7 (currently amended). The optical device as recited in claim 5 wherein said partially reflective ~~surface~~ mirror comprises a splitter .

8 (currently amended). The optical device as recited in claim 7, further comprising:  
an optical fiber ~~to receive light passing through~~ above said partially reflective ~~surface~~ mirror.

9 (original). The optical device as recited in claim 1 wherein said input leg, said output leg, and said horizontal connecting portion comprise molded plastic.

10 (original). The optical device as recited in claim 6 wherein further comprising:  
a hermetic housing to package said optical device.

11 (currently amended). A method for monitoring a beam traveling orthogonal to a substrate, comprising:

positioning an input leg of a tap device over a light source on a substrate;  
positioning an output leg of said tap device over a light detector on said substrate; and  
reflecting a tapped portion of light from said light source traveling through said input leg off a coated surface to said output leg and onto said light detector; and  
passing a larger portion of light directly through the input leg to a fiber.

12 (cancelled).

13 (original). A method of monitoring a beam as recited in claim 11, further comprising:

P16459

Serial No. 10/608,879

forming said input leg and said output leg from an integral piece of molded plastic.

14 (original). A method of monitoring a beam as recited in claim 13 further comprising:  
forming a lens on an end of said input leg.

15 (currently amended). A method of monitoring a beam as recited in claim ~~12~~ 11 wherein said tapped portion of light comprises approximately 10% of the ~~beam~~ light.

16 (original). A method of monitoring a beam as recited in claim 11, further comprising:  
using signals from said light detector to control operating parameters of said light source.

17 (currently amended). An optical system, comprising:  
a vertical cavity surface emitting laser (VCSEL) positioned on a substrate;  
a light detector positioned adjacent said VCSEL on said substrate;  
a monitoring assembly above said substrate, comprising:  
an input leg over said VCSEL;  
an output leg over said light detector, parallel to said input leg and separated by a horizontal connecting portion, the horizontal connecting portion having a first angled surface above the input leg and a second angled surface above the output leg;  
~~a partially reflective mirror on an angled top surface of said input leg; and~~  
~~a mirror on an angled top surface of said output leg~~  
a first coating to form a partially reflective mirror on the first angled surface over the input leg to allow a portion of a beam to emerge from a top of the input leg ;  
and  
a second coating to form a substantially totally reflective mirror on the second angled surface above the output leg.

18 (original). An optical system as recited in claim 17, further comprising:  
a lens formed in an end of said input leg.

P16459

Serial No. 10/608,879

19 (original). An optical system as recited in claim 17 wherein said monitoring assembly comprises molded plastic.

20 (original). An optical system as recited in claim 19 further comprising:  
a hermetic housing for packaging said substrate and said monitoring assembly.

21 (original). An optical system as recited in claim 20 further comprising a fiber positioned over said partially reflective mirror.

22 (original). An optical system as recited in claim 17 further comprising:  
a controller for receiving signals from the light detector to control operating parameters of said VCSEL.